

Climate Change and Herding in Three Mongolian Eco-zones: Incontrovertible Warning Signs and Local Responses

June 15-July 3, 2020



Course Instructors:

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Course Overview:

In this course participants will engage in explorations and research into climate change in mountain, steppe, and desert eco-zones of central Mongolia, with a focus on herders' observations and responses to climate stress. Through this module, students will have the opportunity to conduct interviews with herders and local environmental management professionals in three distinct rural sites, to compare meteorological measurements with herders' local knowledge of a changing climate, and to explore potential adaptation to climate change in relation to social, economic, and political forces in rural Mongolia. Participants will also visit sites of historic, cultural, and ecological significance such as Kharkhorin--the capital of the Mongol Empire, Erdene Zuu monastery, Khustai Nuruu--a conservation center for the native Przewalski's horse.

This course focuses on documenting Mongolian herders' observations of climate change and exploring the interconnections among climate change and other environmental and sociopolitical challenges that nomadic herders are facing. The course emphasizes the value of local knowledge for understanding and addressing climate change impacts. We will also draw from research in natural and social science disciplines such as climatology, geography, rangeland ecology, and anthropology to understand challenges in nomadic pastoralism.

This course visits steppe, mountain, and desert eco-zones within central Mongolia, traveling both "off the beaten track" to engage directly with herders in the countryside, and visiting sites of cultural, historical, and ecological significance. At an environmental monitoring station in rural Arkhangai Aimag, in the Altai Mountain range, we will learn how meteorological data is collected and examine changing patterns in the data. We will also interview herders about their

observations of changing precipitation and temperatures and hear how these changes are impacting the local environment. Herders throughout Mongolia are knowledgeable about climate change, both from the news and from clear transformations in weather patterns and rangeland ecology that they have witnessed over the past two or more decades. We will learn how herders are being impacted by these changes and what they see as the best solutions—such as grassroots environmental management, educational programs, improved government services, or policy changes—that would support the herding livelihood amid changing conditions. We will meet with one group of herders that is planting and protecting diverse native plant species to restore degraded pastures.

Additional site visits will be to steppe and desert sites in Ovorkhangai and Dundgovi Aimags, where we will also interview herders and local environmental management professionals about the changes that they have observed and the challenges that they are experiencing. Along the way, we will visit historic sites such as Kharkhorin, the old capital of the Mongol Empire, and historical Buddhist monasteries. In Dundgovi, we will see the effects of coal mining and talk to herders about how mining compounds the effects of climate change by stressing pasture and water resources.

Coursework throughout our travels will involve a comparison of climate change and herders' responses at the three sites in the respective mountain, steppe, and desert eco-zones that we visit. We will also contextualize the challenges brought on by climate change in relation to social, economic, and political forces, and discuss climate justice. We will learn how herders are adapting and organizing to build resilience against increasing stresses like drought, pasture degradation, and abnormal winter precipitation, but we will also consider the need for institutional support for safeguarding herding livelihoods and facilitating adaptation. Finally, participants will reflect on the interview methodology and the value of local ecological knowledge for understanding the effects of climate change.

Participants do not need to speak Mongolian; program leaders and staff will provide translation during interviews with herders and local experts. Lodging will be a combination of staying in *ger* camps and camping. Participants will have opportunities to engage in some aspects of herding culture, such as riding horses and/or camels and milking goats.

Anticipated Course Activities:

June 15-18: Program and Course Orientation in Ulaanbaatar. Participants will meet the students and faculty in the ACMS Field School, gain an introduction to Mongolian language, culture, history, and contemporary issues, and begin to engage in course preparations such as an overview of field interview techniques and crucial issues impacting mountain, steppe and desert eco-zones in Mongolia..

June 19-22: Staying at ger camp by Ogii Nuur in Arkhangai province. Through lectures and interviews with herders, we will learn how Ogii lake and the surrounding rangeland has been affected by climate change, and how herders are coping with changes.

June 23-26: Staying at ger camp Ikh Tamir district of Arkhangai province. We will make comparisons of meteorological data and herders' local knowledge. We will also visit local leaders to learn about environmental management and plans for addressing increasing climate risk. We will also spend more time with herding families and learn more about traditional knowledge in herding and handcrafts through participant-observation.

June 27-28: Stay at ger camp near Kharkhorin Historical Site and Erdene Zuu Monastery. Participants will learn about Mongolian history while visiting two important historical sites and museums. We will also learn about steppe ecology and interview herders in the area about climate change and their strategies for adapting.

June 29-July 1: Stay at ger camp near Elsen Tasarkhai Sand Dunes. We will visit Elsen Tasarkhai sand dunes and learn about desert ecology and the issue of desertification, interviewing affected herders about their observations and how they have responded to new challenges.

July 2: Stay at ger camp in Hustai Nuruu Park. Here, participants will see Przewalski's horses (takhi in Mongolian) in their natural habitat and learn about the species' reintroduction and conservation. We will also have final course discussions on observations and lessons learned before departing to return to Ulaanbaatar.

July 3: ACMS Mongolia Field School wrap up conference in Ulaanbaatar. Join together with the participants of the other field school courses along with students, faculty and interested persons in Ulaanbaatar to discuss observations and findings from the field research work and site visits.

About the Instructors:



Annika Ericksen, PhD, is an Assistant Professor of Anthropology at Gustavus Adolphus College in Saint Peter, MN, and served as a Peace Corps Volunteer in Mongolia. She earned a PhD in Anthropology with an interdisciplinary minor in Global Change from the University of Arizona in 2014. Her dissertation on *dzud* disasters and post-socialist politics of responsibility in Mongolia was supported by an ACMS research fellowship and a Fulbright-Hays DDRA. Since 2014, she has been teaching anthropology as part of an undergraduate liberal arts program, and she has begun work on a book about Mongolian herders' experiences of *dzud*. She has made research trips to her field site in Bayankhongor twice in recent years, in the summer of 2016 and January 2019. While teaching in Minnesota, she engages her students in research, for example, taking them to visit farms to interview corn and soybean farmers who are affected by rapid changes in the agricultural system. She is currently teaching a course on Anthropology and Climate Change, and she has also taught on Nomadic Pastoralism.



B. Batbuyan, PhD, is the Director of the Center for Nomadic Pastoralism Studies and a former Director of the Institute of

Geography (Mongolian Academy of Sciences). Trilingual in Mongolian, English, and Russian, he has over twenty years of experience collaborating with international physical and social scientists. He has also been influential in training a new generation of Mongolian geographers by engaging them in fieldwork on a variety of projects. His research has focused on socio-environmental governance of pasturelands in the context of environmental change. As a broadly trained social and environmental geographer, he is fluent with new technologies for monitoring environmental change and with ethnographic research methods for learning from and working with herders throughout Mongolia.